

FOREST INSECT AND DISEASE MANAGEMENT  
U. S. FOREST SERVICE  
DORAVILLE, GEORGIA

REPORT OF AERIAL DETECTION SURVEY

LAND OWNERSHIP OR SURVEY AREA: **Jefferson National Forest**

STATE: **Virginia**

AREA WITHIN SURVEY AREA: 1,675,000 acres

PERCENT COVERAGE: 50%

DATE: June 26-27, 1979

SURVEY CREW: C. W. Dull, Forest Insect & Disease Management;  
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SURVEY OBJECTIVES: The purpose of this aerial survey and subsequent on-site examinations of damage observed was to detect the presence of harmful forest insect and disease activity on the Jefferson National Forest.

RESULTS

Extensive and severe (100%) defoliation was observed on Whitetop Mountain and Mt. Rogers (Fig. 1-2). Ground checks in this area revealed defoliation caused by the fall cankerworm, *Alsophila pometeria* (Harr) and a woolly aphid. However, the suspected primary cause of defoliation may be a leafhopper due to the browning, withering and curling of the foliage. Adult leafhoppers were not found in the Mt. Rogers area but have been found in the same type forests in North Carolina experiencing similar defoliation characteristics. The leafhopper is also suspected of vectoring a foliage disease found on the underside of the leaves.

In the spruce-fir type forests on Mt. Rogers, totally red crowns of spruce and/or fir were observed. Approximately ten trees displayed the red foliage characteristics of a balsam woolly aphid, *Adelges piceae* (Ratz) infestation.

Light to moderate defoliation was observed on approximately 17,000 acres of hardwoods throughout the Jefferson National Forest.

Defoliation of pine was also observed in stands of Virginia and pitch pine throughout the survey area, probably caused by the Virginia pine sawfly, *Neodiprion pratti pratti*.

## CONCLUSIONS

Further investigations should be conducted to determine the impact and primary cause of defoliation and its interaction, if any, with the foliage disease found on Mt. Rogers and Whitetop Mountain. Similar, wide-spread defoliation has also been detected on Roan and Grandfather Mountains in North Carolina.

Ground survey activities conducted by FIDM personnel in Asheville, North Carolina have detected the presence of balsam woolly aphid on Mt. Rogers for the first time. The tree mortality observed in the spruce-fir type was also the first reported from an aerial survey. Continued spruce-fir mortality caused by the balsam woolly aphid on Mt. Rogers should be expected.

In general, forest insect and disease activity on other areas of the Jefferson National Forest does not present a serious threat to the timber and recreational resources.

National Forest personnel should continue field surveillance for the detection of forest insect and disease activity.

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For any additional information, contact:

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Figure 1. Aerial view of defoliation observed in the Mt. Rogers and Whitetop Mountain area.



Figure 2. Defoliation on Mt. Rogers.